

# Notice of Allowability

Application No.

10/812,875

Examiner

Hai L. Nguyen

Applicant(s)

CHOU ET AL.

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2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 02/24/2006.
2. ☒ The allowed claim(s) is/are 1,2,5-8 and 14-18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
TIMOTHY P. CALLAHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendments received on 02/24/2006 has been reviewed and entered in the case. As to the prior art rejections to the claims, Applicant's amendments have overcome the previous Final rejections, mailed on 11/30/2005, as such; the rejections have been withdrawn. Therefore the case is found to be in allowance condition for the reasons as set for below.

## **REASON FOR ALLOWANCE**

2. The following is an examiner's statement of reasons for allowance: Applicant has amended the base claims to include the claims that would be allowable if rewritten in independent form as stated in the previous Office Action. As to pending claims of the application, the prior art of record fails to disclose or fairly suggest a phase frequency detector (as shown in Fig. 7), as recited in claim 1, having specific structural limitations such as the phase error detecting unit (400) comprising a first flip-flop (401) for outputting a first flag signal (FLAG\_1) according to the first input signal (Fr); a second flip-flop (402) for outputting a second flag signal (FLAG\_2) according to the second input signal (Fi); and a sampling circuit (403) for outputting the phase error signal (UP, DOWN) according to the first flag signal (FLAG\_1) and the second flag signal (FLAG\_2), wherein the length of the phase error signal has a substantial linear relationship with the phase error of the first input signal and the second input signal; wherein the phase error detecting unit is reset by the reset signal responsive to an edge of the first input signal, and remains reset for a significant period of time despite of the level of the

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first input signal after said edge; and being configured in combination with the rest of the limitations of the base claims and any intervening claims.

The prior art of record fails to disclose or fairly suggest a phase frequency detector (as shown in Fig. 7), as recited in claim 14, having specific structural limitations such as the phase error detecting unit (400) comprising a first flip-flop (401) for outputting a first flag signal (FLAG\_1) according to the first input signal (Fr); a second flip-flop (402) for outputting a second flag signal (FLAG\_2) according to the second input signal (Fi), wherein the first reset signal (RESET\_1) resets the first flip-flop and the second reset signal (RESET\_2) resets the second flip-flop; and the reset unit (410) comprises a third flip-flop (411) for outputting the second reset signal according to the first input signal; and a fourth flip-flop (412) for outputting the first reset signal according to the second input signal, wherein the length of the phase error signal has a substantial linear relationship with the phase error of the first input signal and the second input signal; wherein the phase error detecting unit is reset by the reset signal responsive to an edge of the first input signal, and remains reset for a significant period of time despite of the level of the first input signal after said edge; and being configured in combination with the rest of the limitations of the base claims and any intervening claims; and being configured in combination with the rest of the limitations of the base claims and any intervening claims.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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*Conclusion*

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 571-272-1747. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HLN 

March 17, 2006